DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 74.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-028722
Date Inspected: 06-Nov-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Goodwin Steel, UK

OSM Arrival Time: 1330
OSM Departure Time: 2400
Location: Stoke-On-Trent, UK

CWI Name: Fred Hawksworth

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☐ Yes	☑ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Type B16 Cable Bands

Summary of Items Observed:

The Quality Assurance (QA) Inspector Art Peterson arrived at Goodwin Steel Casting (GSC) Foundry in Stoke-on-Trent, England to observe the upgrade – (welding of excavated areas) operation on the Type B16 supplementary cable band castings. The manufacturing of the additional Type B16 supplementary cable bands at the GSC Foundry are part of a risk management strategy to address the concern with certain cable band gaps closing up as the work is progressing on-site during the main cable load transfer to the orthotropic box girders. The following castings observed at the GSC Foundry on this date were:

Cable Band Casting GG37015-7 (Female Section):
The QA Inspector randomly observed GSC welding personnel Terry Knall performing the Shielded Metal Arc Welding (SMAW) operation in the (1G) flat position on the excavated areas on cable band casting female section GG37015-7. The visual inspection of the excavated areas – (7) areas total on cable band casting Female section GG37015-7 were performed on first shift by Applied Inspections' CWI Fred Hawksworth and witnessed by Caltrans QA Inspector Shailesh Wadkar. The excavated areas listed on the weld excavation map were considered to be classified as both major and minor weld repairs.

Prior to the start of the welding operation, the QA Inspector verified and observed that Steve Woodcock performed the preheat operation to the minimum temperature listed in WPS 04-0120F4B Issue 5 of 160 degrees Celsius and utilized the 160 degree Celsius tempilstik to verify the temperature at least 75 mm around the perimeter of the excavation. Afterwards, the QA Inspector verified that the welding parameters – (Amps) were observed to be between the minimum of 80 and maximum of 140 utilizing the (3.2) diameter electrode as listed on the approved WPS 04-0120F4B Issue 5.

The repair weld operation observed on (7) excavated areas of the (7) total appeared to be in general compliance with WPS 04-0120F4B Issue 5.

Cable Band Casting GG37015-8 (Female Section):
The QA Inspector randomly observed GSC welding personnel Steve Woodcock performing the Shielded Metal Arc Welding (SMAW) operation in the (1G) flat position on the excavated areas on cable band casting female section GG37015-8. The visual inspection of the excavated areas – (12) areas total on cable band casting Female section GG37015-8 were performed on first shift by Applied Inspections' CWI Fred Hawksworth and witnessed by Caltrans QA Inspector Shailesh Wadkar. The excavated areas listed on the weld excavation map were considered to be classified as both major and minor weld repairs.

Prior to the start of the welding operation, the QA Inspector verified and observed that Steve Woodcock performed the preheat operation to the minimum temperature listed in WPS 04-0120F4B Issue 5 of 160 degrees Celsius and utilized the 160 degree Celsius tempilstik to verify the temperature at least 75 mm around the perimeter of the excavation. Afterwards, the QA Inspector verified that the welding parameters – (Amps) were observed to be between the minimum of 80 and maximum of 140 utilizing the (3.2) diameter electrode as listed on the approved WPS 04-0120F4B Issue 5.

The repair weld operation observed on (12) excavated areas of the (12) total appeared to be in general compliance with WPS 04-0120F4B Issue 5.

Summary of Conversations:

Except as noted above, only general conversations between this QA Inspector and Goodwin Steel Casting production personnel relevant to the welding operation performed on the (2) cable band casting Female clamp sections of the Type B16 supplemental cable bands.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Gary Thomas, 916-764-6027, who represents the Office of Structural Materials for your project.

Inspected By:	Peterson,Art	Quality Assurance Inspector
Reviewed By:	Foerder,Mike	QA Reviewer